

ABSTRACT

Mobile, wireless communications apparatus for transmitting and receiving voice and data signals and being divided into first and second units arranged to be spaced apart but normally operated within a close range and each having a low power transceiver for communication between the first and second unit over a low power radio link. The first unit has a more powerful transmitter and an antenna for receiving and transmitting signals to a remote location, typically through a base station forming part of a cellular network. The second unit is significantly smaller than the first unit and incorporates miniaturized elements including a display, key pad, microphone speaker and micro controller, together with the aforementioned low power transceiver. The battery supply in the second unit is significantly smaller than that provided in the first unit, the second unit being designed to be a size of the order of a conventional wrist watch and being capable of being worn on the wrist of a user. Voice and data are communicated from the second unit and the first unit through the low power transceivers and low power radio link, the first unit relaying said signals to a remote location through a cellular network or a communications satellite. The first unit which is preferably the size of the order of present day cellular phones small enough to be carried in a pocket book, nap-sack, fanny-pack or even glove compartment of an automobile while providing a wrist mountable second unit which is small, light-weight and convenient to use and yet capable of communicating with a cellular network through the first unit by way of a low power radio link.